

PERINATAL LESSONS FROM THE PAST

Jean-Louis Baudelocque (1746–1810) of Paris and *L'art des accouchemens*

P M Dunn

Arch Dis Child Fetal Neonatal Ed 2004;89:F370–F372. doi: 10.1136/adc.2003.044008

Le grand Baudelocque was the leading French obstetrician at the end of the 18th century and into the 19th. Although best known for his forceps and external pelvimeter, probably his greatest contribution was his obstetric text and the teaching of obstetrics to a generation of midwives and young doctors.

Jean-Louis Baudelocque was born in 1746 in a village in Picardie, France, called Heilly. His father was a surgeon and he followed in his footsteps, training in Paris with a special interest in anatomy, surgery, and obstetrics. There he became the outstanding student of the distinguished obstetrician, Solayrés de Renhac, at the Charité Hospital. When on one occasion the latter was sick, Baudelocque, while still a student, took over his lectures, delivering them with authority. He became a member of the Collège de Chirurgie in 1776 with a thesis arguing against the practice of symphysiotomy in the management of pelvic contraction. Shortly after this, he joined the staff, and his reputation rose rapidly both as an academic and as a private practitioner (fig 1).^{1–4}

In 1775, Baudelocque published a manual for midwives, *Principes sur l'art des accouchemens*, which went through five editions. Six years later he published his main work, *L'art des accouchemens*.⁵ Without claiming great originality, Baudelocque made clear his own judgment on how best to manage the problems of obstetric practice. In particular, he was interested in the management of dystocia, pioneering methods of detecting potential pelvic contraction and of managing it.

Rickets was commonplace and as a result dystocia due to pelvic deformity had become a major problem of childbirth. Baudelocque showed how external measurements using a pelvimeter might reveal contractions of the bony pelvis that were not otherwise obvious. His measurement, the external conjugate, became known as Baudelocque's diameter and, although inferior to Smellie's internal conjugate, was widely used for more than half a century. In the management of dystocia, he opposed the use of the premature induction of labour introduced by Macaulay in 1756, and also the operation of symphysiotomy, first undertaken by Jean René Sigault in 1777. Instead he advocated the use of forceps, or alternatively of internal version and breech extraction, and in very severe cases of the use of caesarean section, an operation he

described in great detail and undertook on occasion himself.

In 1801, John Hull, a colleague of Charles White and a physician to the Lying in Charity in Manchester, published *A translation from the French of two memoirs on the caesarean operation by J.L. Baudelocque*.⁶ In this text, Baudelocque had reported 31 successful cases of section collected from many sources since 1750. He described the technique in detail that he used in his own cases, emphasising the importance of emptying the bladder with a catheter first and of persuading the woman to suckle her child afterwards in order to "more speedily dry up the discharges which are made through the wound ...". Not surprisingly, this subject was very controversial at that time.

The following extracts from Baudelocque's system of midwifery⁷ translated by John Heath, a surgeon in the Royal Navy, demonstrate his style and approach to obstetrics.

On the folded shape of the fetus and presentation⁷

Baudelocque noted that the natural folded posture of the fetus formed an oval body which had occasioned Hippocrates to compare the child

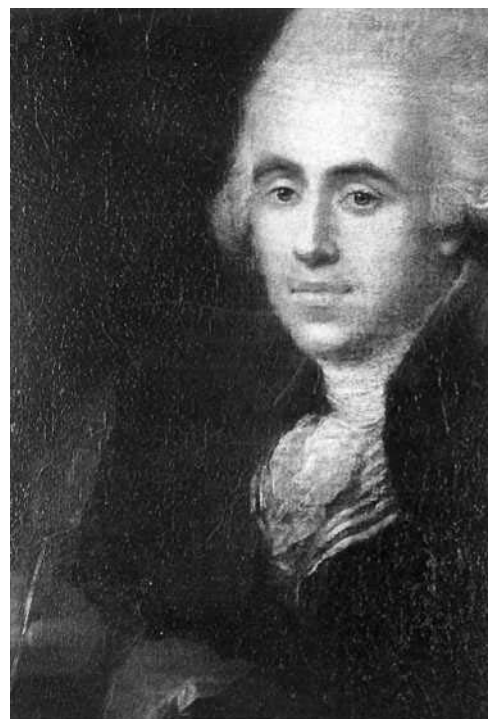


Figure 1 Jean-Louis Baudelocque (1746–1810).

Correspondence to:
Professor Dunn,
Department of Child
Health, University of
Bristol, Southmead
Hospital, Southmead,
Bristol BS10 5BN, UK;
P.M.Dunn@bristol.ac.uk

Accepted 11 October 2003

in utero to an olive contained in a bottle. He added that: "... it is the head which constitutes the small extremity of the oval body described by the child; while the breech, the thighs, the legs, and feet at the same time constitute the large extremity; as the lower part of the cavity of the uterus forms the narrowest part, and the fundus the largest ...", this determined the normal vertex presentation of the baby. He dismissed the commonly believed fetal summersault theory in late pregnancy.

On the amniotic fluid and membranes⁷

"(The waters) are one of the instruments which nature uses to effect the dilation of the uterus in pregnancy, and the opening of its orifice in labour. These waters, on account of their lymphatic quality, have appeared fit for the nutrition of the fetus, besides they facilitate its motions, render them less troublesome and painful to the mother, and likewise diminish the too violent impression of external bodies on the child."

"The premature opening of the membranes often renders labour more tedious, and in some respects more laborious ... Except in cases of flooding, or convulsions, we ought never to open the membranes before the orifice of the uterus be entirely prepared for delivery; that is to say, till it be larger than a crown piece, and its edge so soft and thin that it may easily extend further. The labour ought moreover to be in its full force; which supposes the pains to be strong and frequent."

On maternal posture in labour⁷

"Although the situation in which women are usually placed, in the last period of labour, is often not less important than that at the beginning, yet it is not the same in all nations. Reason, and convenience to the woman, are always less consulted than custom. In some countries, as in Flanders, Holland, and Spain, etc. the women have chairs made on purpose. Almost all over England, they place themselves on a bed, and lie on their side, with the breech turned towards the accoucheur; the legs and thighs being half bent, and their knees separated by a pillow. In some of our provinces the women are delivered kneeling on a cushion, with the elbows resting on a chair: in others they keep themselves standing, or sit on the knees of some person who supports them. But of all these positions, none is more convenient than (the little bed) adopted among us."

Baudelocque noted that there were "no valves in the umbilical vein, as in other veins" and that there were "no nerves in the cord, any more than in the placenta and membranes; therefore those parts are insensible". He wrote:

The umbilical circulation at birth⁷

"The almost instantaneous cessation of the course of the blood in the umbilical arteries, as soon as the child is born, is without doubt one of those surprising phenomena of the animal oeconomy, of which it is very difficult to give a satisfactory explication. Experience teaches us that it depends on respiration, since the blood flows freely in those arteries till that function is well established; then ceases; and recovers its course again if that new function

should happen to be suspended a few minutes after birth, or only become a little laborious. In these latter cases, if the arteries of the cord cut a few inches from the umbilicus be let loose, the blood flies out with rapidity; if they be tied, they fill above the ligature, and beat with sufficient force to move the end of the cord laid on the belly. If the obstacle which opposes respiration continue, the child soon becomes a victim to it: if the arteries be not tied, it suffers a dangerous or mortal haemorrhage; and if they be tied tight enough to resist the course of the blood, it falls into a state of apoplexy or suffocation ... According to these and the like observations, should we not be founded in believing that the placenta supplies the place of lungs to the foetus; since the blood cannot pass freely in the one, but its motion slackens, and even ceases entirely, in the other?"

On ligating the umbilical cord⁷

"As soon as the child is born, we lay it transversely, between its mother's legs, and so near to her that the cord may not be stretched ... Some accoucheurs are accustomed to leave the child in that state several minutes, and even longer, without meddling with the cord ... while many others scarcely give themselves time to tie the cord, before they remove it from its mother ... The custom of making two ligatures on the cord, seems to be as ancient as the art itself ... These ligatures do not however seem essentially necessary, when things are in the natural order ... (they) are not only useless in the first moments, but may also become hurtful. That which is made on the portion of the cord next to the umbilicus, always injurious to plethoric children, whose birth, more or less laborious, has occasioned sanguine congestions in the principal viscera, is much more so to those who are born in a state of apoplexy, with the face swelled and livid, and with universal signs of excessive repletion; for it seldom fails to confirm the fate by opposing the evacuation which is then so important to procure by the cord ... The section of the cord, on account of the depletion it procures, is the most efficacious assistance we can give to those born in a state of apoplexy ... This same ligature, dangerous in these circumstances, and, besides always useless in the first moments, may become very necessary afterwards; for some children have perished by a haemorrhage from the umbilical cord, the ligature on which has been badly made; and others have been extremely weakened by loss of blood which has happened one or two days after their birth ..."

On the delivery of the placenta⁷

"The ligature which is intended to prevent the flow of blood from the mother (placenta), by the umbilical vein, is not only useless, but by opposing the depletion of the placenta, it may in many cases render the delivery of it a little more difficult. We ought never, in the natural order, to attempt delivering the placenta, till it be detached, and the uterus endeavours to expell it ... We favour the deliverance, by suffering the placenta to empty itself by the umbilical vein; by frictions on the hypogastric region, to excite or maintain the action of the uterus; and by pulling the umbilical cord ..."

Infant care after birth⁷

“(After cutting the cord, the child) must be kept warm ... We may also bathe it in warm water ... The child may do without nourishment the first day; but it is not proper to continue that severe regimen longer. In the meantime it may be made to swallow from time to time a few spoonfuls of water, sweetened with sugar or honey, in order to dilute the meconium, and favour its evacuation ... children suckled by their mother have less need ... because the first milk, called colostrum ... sufficiently fulfils the same indications”.

In 1798, after the French Revolution, Baudelocque was made professor of obstetrics in the newly established École de Sauté and also director of the Maternité where he supervised the training of midwives as well as the 1700–2000 deliveries each year. This hospital with its excellent clinical and teaching facilities was unique in Europe at that time and was the main French centre for the training of accoucheurs and midwives. Among the obstetric techniques taught there

were internal version followed by breech extraction and the use of his forceps, designed by Baudelocque on the basis of an earlier model by Levret. Baudelocque’s practice thrived, and he became the acknowledged master accoucheur in France, being referred to as le grand Baudelocque. Napoleon invited him to attend the Empress Marie-Louise in her first confinement, and he was also engaged to look after the Queen of Holland and the Grand Duchess of Berg. On 1 May 1810, Baudelocque died at the age of 64.^{1–4}

REFERENCES

- 1 **Graham H.** *Eternal eve*. Altrincham: W Heinemann, 1950.
- 2 **Munroe Kerr JM**, Johnstone RW, Phillips MH, eds. *Historical review of British obstetrics and gynaecology*. Edinburgh: E & S Livingstone, 1954.
- 3 **Speert H.** *Obstetric and gynecologic milestones*. New York: Macmillan Co, 1958.
- 4 **Baskett TF.** On the shoulders of giants. *Eponyms and names in obstetrics and gynaecology*. London: RCOG Press, 1996:245–6.
- 5 **Baudelocque J-L.** *L’art des accouchemens*. Paris: Méquignon, 1781.
- 6 **Baudelocque J-L.** *A translation from the French of two memoirs on caesarean operation by J. Heath*. London, 1801.
- 7 **Baudelocque J-L.** *A system of midwifery*. (Translated from French by John Heath.) London, 1790.